

CLAIMS

1. A method of providing capture management in an implantable medical device, the method comprising:

monitoring for indicators of a likely increase in pacing threshold; and

increasing a safety factor used in setting a pacing pulse output energy if an indicator of increased pacing threshold is detected.

2. The method of claim 1 further comprising:

setting a time interval during which the increased safety factor is maintained; and

restoring the safety factor to a programmed value after the time interval has expired.

3. The method of claim 2 wherein the duration of the time interval is set according the type of indicator of increased pacing threshold that has been detected.

4. The method of claim 2 further comprising:

monitoring for indicators of increased threshold during the time interval; and

resetting the time interval for which the increased safety factor is maintained if a second indicator of increased pacing threshold is detected.

5. The method of claim 1 further comprising:

performing a pacing threshold search after detecting an indicator of increased pacing threshold; and

reducing the increased safety factor back to a programmed value if the pacing threshold search yields a result.

6. The method of claim 1, wherein indicators of increased threshold include a change in lead impedance.

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7. The method of claim 1, wherein indicators of increased threshold include arrhythmia detections.
8. The method of claim 7, wherein the arrhythmia detections include arrhythmia detections exceeding a predetermined duration.
9. The method of claim 1, wherein indicators of increased threshold include a pacing mode switch.
10. The method of claim 1, wherein indicators of increased threshold include a refractory sensed event or an event triggered by a refractory sensed event.
11. An implantable medical device, comprising:
 - a pulse generator for delivering pacing pulses;
 - at least one electrode in electrical communication with the pulse generator for delivering the pacing pulses to cardiac tissue; and
 - a microprocessor for controlling the pulse generator, receiving sensed data from the at least one electrode, wherein the sensed data includes an indicator of increased pacing threshold, and increasing a safety factor used for setting the pacing pulse energy delivered by the pulse generator when the indicator of increased pacing threshold is detected.
12. An implantable medical device (IMD) comprising:
 - means for monitoring for indicators of a likely increase in pacing threshold; and
 - means for increasing a safety factor used in setting a pacing pulse output energy if an indicator of increased pacing threshold is detected.
13. The IMD of claim 12 further comprising:
 - means for setting a time interval during which the increased safety factor is maintained; and

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means for restoring the safety factor to a programmed value after the time interval has expired.

14. The IMD of claim 13 wherein the duration of the time interval is set according the type of indicator of increased pacing threshold that has been detected.

15. The IMD of claim 12 further comprising:

means for performing a pacing threshold search after detecting an indicator of increased pacing threshold; and

means for reducing the increased safety factor back to a programmed value if the pacing threshold search yields a result.

16. The IMD of claim 13, wherein indicators of increased threshold include a change in lead impedance.

17. The IMD of claim 13, wherein indicators of increased threshold include arrhythmia detections.

18. The IMD of claim 17, wherein the arrhythmia detections include arrhythmia detections exceeding a predetermined duration.

19. The IMD of claim 13, wherein indicators of increased threshold include a pacing mode switch.

20. The IMD of claim 13, wherein indicators of increased threshold include a refractory sensed event or an event triggered by a refractory sensed event.